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內蒙一始新世巨犀*

周明鎮 邱占祥
（中国科学院古脊椎动物与古人类研究所）

巨犀类的化石过去仅发現于漸新世和早中新世地层。1959年秋，中国和苏联的古生物学工作者，在內蒙烏兰察布盟沙拉木伦河流域北部的烏拉烏苏附近上始新統沙拉木伦組中，采集了一个相当完整的巨犀类的骨架（周明鎮、洛日捷斯特文斯基，1960，頁7）。这个标本可能是現知最完整的巨犀化石骨架，代表一种比較原始的新属、新种，也是目前知道的时代最早的巨犀类，在形态上也接近于所有晚期巨犀的祖先。

这篇短文是关于烏拉烏苏新巨犀的初步簡报，至于全部骨骼及属于同一种的其它新材料的詳細描述和討論将另文发表。

属 ***Juxia***[1] **gen. nov.**

种 ***J. sharamurenense*** **sp. nov.**

正型标本 一近于完整的骨架（野外編号SS04104，中国科学院古脊椎动物与古人类研究所編号V. 2891）。

其它材料 一不完整的头骨及下牙床（SS04103$_{1-2}$，苏联科学院古生物研究所保存）；一殘破的幼年个体的头骨（SS04084；V. 2892）；上頜骨断块，带有M^1—M^3（SS04000；V. 2893），下牙床水平枝一段及零星肢骨等。

产地及层位 內蒙烏兰察布盟达安罕茂明安旗烏拉烏苏井稍北洼地。上始新統沙拉木伦組，浅灰綠色及浅棕紅杂色粘土层。

属及属型种的特征 一种身体較小的原始巨犀，身体高約为葛氏巨犀（*Indricotherium grangeri*）的一半，头骨、下頜骨及上、下頰齿的基本結构也与葛氏巨犀的极相似。头骨长头型，头后方的頂顱部分长，有明显的矢状嵴；枕髁高；副枕突与听后突形成一很寬（前后）的突，而与关节后突分开。額及鼻骨上沒有表示有角存在的印痕，額骨前部及鼻骨后部向背側形成弧形隆起，向前，鼻骨逐漸向下傾斜，其游离部分細长，成尖錐状，断面为尖角向下的三角形；鼻頜切迹深，达P^2后方。

下頜骨的构造与葛氏巨犀的很相似，但水平枝前端不象其它晚期巨犀的那样向下弯曲；下頜联合部也較短，后沿在P_1处。

齿式完全$\left(\frac{3\cdot1\cdot4\cdot3}{3\cdot1\cdot4\cdot3}\right)$。上、下門齿的排列較疏散，不特化，第一对已稍增大，其它两对較小，但未明显地退化；犬齿位置靠近于第三对門齿后側，大小及形态皆与門齿相近，上犬齿稍大；犬齿后方与第一对前臼齿間有一較长的虛位。

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1) *Juxia*——"巨犀"，汉語拉丁拼音。

顱后部分骨骼已具有明显的巨犀类的特征，但整个說来，結构比較輕巧，不象已知的其它各种那样笨重。

脊椎部分的特征，在頸椎上最为明显。各个頸椎均已加长，但沒有象晚期巨犀所特有的椎体內的中空現象。椎头与椎窝为圓形而不是扁圓形。肩胛骨在比例上較葛氏巨犀的长，肩峯不明显，岡結节发育。四肢骨骼修长，不象晚期巨犀中那样近于柱状，骨两端的关节部分使肢骨可以作較大角度的折曲；各种結节及隆起都較显著和粗糙。腕及跗骨較高，不象后期类型中那样趋于扁平。掌及蹠骨修长。

正型标本的一些主要部分的测量(单位：毫米)

头骨长(Length, skull, Pmx to condyle)	595(mm)
上齿列长 (L. I^1—M^3)	310
上頰齿列长 (L. P^1—M^3)	215
下頜长(L. mandible)	445
下齿列长(L. I_1—M_3)	300
下頰齿列长 (L. P_1—M_3)	200
肩胛骨长 (L. scapula)	515
肱骨长(L. humerus)	490
挠骨长(L. radius)	610
尺骨长(L. ulna)	710
股骨长(L. femur)	605
脛骨长 (L. tibia)	590
第三蹠骨长 (L. mt. III)	265

比較　內蒙烏拉烏苏的始新世巨犀，在骨骼及牙齿的基本构造上已經明显地具有巨犀类的特征，但与所有过去已知的各种巨犀类比較，都較原始。身体的大小只有一般漸新世中、晚期巨犀的一半，即使和可能为漸新世早期的較小的类型（如 *Indricotherium parvum*）比較也小得多，与一般始新世的眞犀类（如 *Eotrigonias, Prohyracodon*）比較，則已显得十分庞大了。沙拉木伦巨犀的身体大小更接近于一般漸新世犀类。但在另一方面，根据最近在亚洲新发現的一些材料，如內蒙及西伯利亚的 *Pappaceros* (Wood, H. E.,1963) 和古脊椎动物所在河南卢氏采集的一些尙未描述的标本看来，始新世眞犀类已經有一些种类大小和沙拉木伦巨犀相接近了。

沙拉木伦巨犀最明显的一个特点是有完全的前部齿式，且不十分特化，和与它同时的眞犀类的牙齿基本上十分相似，只是第一对門齿已有增大的趋势。在这一点上，本文作者不久前記述的烏尔丁巨犀(*Urtinotherium* 周、邱，1963)是唯一有完全齿式的巨犀类，只是后者的第一对門齿已強烈增大，而其它門齿及犬齿則退縮。另外，前頜骨及下頜的末端并沒有晚期巨犀那种向下弯曲的現象，下頜骨的前端甚至尙微微向上收斂。

沙拉木伦巨犀的头骨及顱后骨骼的构造基本上已和典型的巨犀类有許多相似之处。主要的区别是頸椎椎体沒有中空的現象，四肢骨比較修长，比較輕巧，不象后期类型中那样近于圓柱状。

总之，沙拉木伦巨犀无論在形态上或时代上，都是現知最原始的巨犀类，并且可能是

所有始新世以后的巨犀类的祖先。比較特别的是烏尔丁巨犀，它的前部齿列从 I_1 至 P_1 都比較密集，可能，烏尔丁巨犀，除第一对門齿継續增大外，其余的門齿、犬齿退縮比較不甚显著。其次，沙拉木伦巨犀的时代虽然較早（晚始新世），但是它的巨犀类的性質已十分明显，已很难看出它和其它早期犀类之間的关系了，因此，巨犀类最早的起源的时間，应該追溯到更早的年代。

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AN EOCENE GIANT RHINOCEROS

CHOW MINCHEN AND CHIU CHAN-SIANG

(Institute of Vertebrate Paleontology and Paleoanthropology, Academia Sinica)

Among the best and most interesting mammalian materials collected by a field party of Chinese and Soviet palaeontologists in 1959 from the Shara Muren Eocene at the type locality at Ula Usu in Inner Mongolia (Chow and Rozhdestvensky, 1960) is a nearly complete skeleton of giant rhinoceros. These fossils represent a new form of giant rhinoceros evidently more primitive than any of the previously known members of this group, which are all of Oligocene or Early Miocene age. The present paper is a preliminary note of these fossils.

Genus *Juxia** gen. nov.

Type species *J. sharamurenense* sp. nov.

Known distribution and Diagnosis as for the type species.

Juxia sharamurenense sp. nov.

Type An essentially complete and well preserved skeleton, skull slightly distorted (Field No. SS 04104; IVPP, Cat. No. V.2891).

Referred specimens An incomplete skull and mandible (SS 04103_{1-2}); a broken young skull (SS 04084; V.2892); a pair of upper jaw fragments with M^1—M^3 (SS 04000; V.2893); and other miscellaneous bones.

Locality and Horizon Ula Usu, Shara Muren district, Inner Mongolia. Upper Eocene Shara Muren Formation, in greenish and brownish clays.

* Ju-xi, giant rhinoceros in latinized Chinese.

Diagnosis A giant rhinoceros relatively small in size, approximately 50%, lineally, that of *Indricotherium grangeri*, and much like the latter species in basic construction of skull, mandible and upper and lower cheek teeth. Skull dolichocephalic, cranial region long and with a distinct sagittal crest; occipital condyles high; paroccipital and post-tympanic processes united into one broad "process", but separated from postglenoid process; frontal region broadly convex upward, nasal bones elongated, with inverted triangular cross-section and tapering anteriorly, and deeply notched at the sides, but not so much as in other species. Premaxillae do not come into direct contact with nasal bones; anterior tip of upper jaw relatively slender and lacking the downward bending as seen in other species.

Dental formula, $\frac{3.1.4.3.}{3.1.4.3.}$; the first pair of incisors, though larger than the others, not much enlarged to become tusks; all the anterior teeth (I—C) sparsely and more or less equally spaced with gaps between one and another and a long diastema between the canine and the first premolar. Symphysis of mandible short, terminating at P_1 posteriorly.

Postcranial skeleton decidedly *Indricotherium*—like, except being slender and more lightly built. Cervical vertebrae elongated, but with solid centra; scapula proportionately much longer, with metacromion, acromion indistinct; limbs slender and not quite pillar-like; articular surfaces of limb bones rather large, allowing larger angles of bending; carpal and tarsal bones comparatively high and do not tend to be flattened; metapodia quite long and slender.

Remarks This new rhinoceros from Shara Muren Eocene is decidedly indricothere-like and more primitive than all the known members of this group. Though of small size and less specialized as an indricothere, it is already among the largest of its rhinocerotoid contemporaries. It shows nearly all the structural features characteristic of that group, except that it has longer limbs and is not so heavily built as the latter forms. It also differs from the others in having full number of little specialized incisors and canines. This feature is retained only with some modification in the recently described Oligocene genus *Urtinotherium* (*U. incisivum* Chow and Chiu, 1963). The occurrence of a rather typical form of giant rhinoceros in upper Eocene indicates that the origination of the group is sure to have dated back to still earlier Eocene time.

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Juxia sharamurenense gen. et sp. nov.